

IN THE CLAIMS

1 (Currently Amended). A process for preparing a low-density polyurethane material in a mould comprising:

- a) applying [[an]] a conventional external mould release agent onto at least those surfaces of the mould which will be in contact with ingredients used for preparing the polyurethane material and/or the finished polyurethane material;
- b) feeding the ingredients into the mould;
- c) allowing the ingredients to form the polyurethane material;
- d) removing the polyurethane material from the mould; and
- e) repeating steps b, c, and d at least 10 times without repeating step a,

wherein at least 25% by weight of the ingredients, excluding any ~~optional~~ water in this calculation, comprise polyether polyol having an average nominal functionality of 2-6, an average equivalent weight of 500-5000, and an oxyethylene content of at least 50% by weight, and wherein the apparent overall density of the polyurethane material removed from the mould is 55-150 kg/m³.

2 (Previously Presented). The process according to claim 1 wherein steps b, c, and d are repeated at least 25 times without repeating step a.

3 (Previously Presented). The process according to claim 1 wherein steps b, c, and d are repeated at least 50 times without repeating step a.

4 (Previously Presented). The process according to claim 1 wherein a flexible polyurethane foam is prepared comprising reacting a polyisocyanate, the polyether polyol and water.

Claim 5 (Cancelled)

6 (Previously Presented). The process according to claim 4 wherein the amount of water is 0.8-5% by weight calculated on all ingredients used.

7 (Previously Presented). The process according to claim 4, wherein the amount of polyether polyol having at least 50% by weight of oxyethylene groups is at least 50% by weight calculated on all ingredients used.

8 (Previously Presented). The process according to claim 4 wherein the reaction is conducted at an NCO index of 40-150.

9 (Previously Presented). The process according to claim 8 wherein the reaction is conducted at an NCO index of 70-110.

10 (Previously Presented). The process according to claim 1 wherein step a is repeated after one week.

11 (Previously Presented). The process according to claim 1 wherein step a is repeated after 24 hours.

12 (Previously Presented). The process according to claim 1 wherein step a is repeated after 8 hours.

Claims 13-15 (cancelled)

16 (Currently Amended). A process for preparing a series of molded polyurethane articles comprising:

- a) applying [[an]] a conventional external mold release agent onto at least one surface of a mold;
- b) feeding ingredients to be used for preparing the polyurethane material into the mold;
- c) reacting the ingredients to form the polyurethane material;
- d) removing the polyurethane material from the mold;
- e) forming the polyurethane material into an article; and
- f) repeating steps b, c, and d at least 10 times without repeating step a,

wherein at least 25% by weight of the ingredients, excluding any ~~optional~~—water in this calculation, comprise polyether polyol having an average nominal functionality of 2-6, an average equivalent weight of 500-5000, and an oxyethylene content of at least 50% by weight, and wherein the apparent overall density of the polyurethane material removed from the mold is 55-150 kg/m³.

17 (Previously Presented). The process of claim 1 wherein said mold is a closed mold.

18 (Previously Presented). The process of claim 16 wherein said mold is a closed mold.

19 (Previously Presented). The process of claim 1 wherein said mold is an open mold.

20 (Previously Presented). The process of claim 16 wherein said mold is an open mold.

21 (Previously Presented). The process according to claim 1 wherein said polyol has a number average nominal functionality of 2-4, a number average equivalent weight of 750-2500 and an oxyethylene content of 60-90% by weight, and is reacted with:

- a) a stoichiometric excess, relative to polyol, of a polyisocyanate containing at least 65% by weight of 4,4'-diphenylmethane diisocyanate or derivative thereof; and
- b) water; to form an isocyanate-terminated, urethane-containing prepolymer having an NCO value of 3-15% by weight.

Claims 22 and 23 (Cancelled).

24 (New). The process according to claim 1 wherein applying a conventional external mould release agent includes applying a wax onto at least those surfaces of the mould which will be in contact with ingredients used for preparing the polyurethane material and/or the finished polyurethane material.

25 (New). The process according to claim 1 wherein applying a conventional external mould release agent includes applying an external mould release agent that does not require curing onto at least those surfaces of the mould which will be in contact with ingredients used for preparing the polyurethane material and/or the finished polyurethane material.

26 (New). The process according to claim 1 wherein feeding the ingredients into the mould includes feeding the polyether polyol and a polyisocyanate into the mould according to a one-shot method.

27 (New). The process according to claim 1 including preparing a prepolymer that is the reaction product of an excessive amount of a polyisocyanate and said polyether polyol, mixing said prepolymer with additional amount of said polyether polyol, and feeding the mixture of said prepolymer and said additional amount of said polyether polyol into said mould.